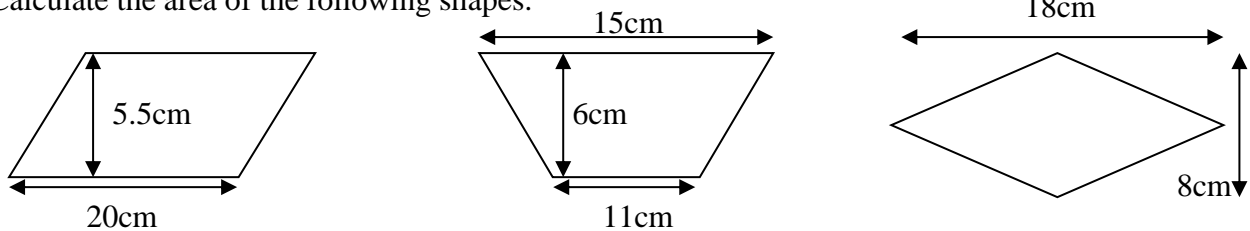


National 4 Homework 19

Questions 1 and 2 are Non Calculator

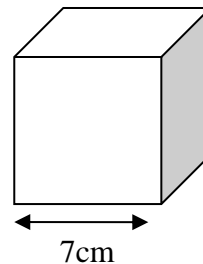
1.
 - a) Write 12.4 million in scientific notation.
 - b) Multiply out and simplify $4(5x - 3) - 2(6 + 9x)$.
 - c) Calculate $96 \cdot 8 \div 40$.
 - d) Factorise $6p - 20$.

2. Calculate the area of the following shapes.



3. Children's play blocks are constructed as shown.

- a) Calculate the surface area of one cube.



- b) There are 26 blocks in a set. Each are to be painted in the same colour before designs are added. 1 tin of paint covers an area of 1800cm^2 . How many tins of paint will be needed for a set of blocks?

4. A Courier firm use the following table to decide how much each parcel costs to be delivered.

| Weight up to | Cost |
|-------------------------------------|--------|
| 500g | £4.10 |
| 1kg | £4.40 |
| 2kg | £6.75 |
| 10kg | £14.40 |
| Add 75p for each kilogram over 10kg | |

How much does it cost to send a parcel weighing

- a) 700g
- b) 3.5kg
- c) 11kg

5. Lindsay is offered two new contracts. His current salary is £21 000 a year. He can either have a 2.5% pay increase, or change to a new salary of £21 700. Which should he choose? You must justify your answer.